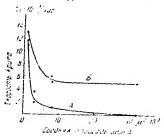
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Approved For Release 2003/12/18: CIA-RDP80-00809A000500220151-7 105 Доктады Акадепан г. жуз в ССР 1948. Tou LA, At A. A.M. Borzdyha А. М. БОРЗДЫКА о причинах повышенной теплоустойчивости (ЖАРОПРОЧПОСТИ) ХРОМОНИКЕЛЕВОГО АУСТЕНИТА С КРУПНЫМ ЗЕРНОМ (Представлено знадемиком Г. Г. Урадомем 17/11/1943) В настоящее время можно считать установленным, что тенлоустойчивость (иначе «жаропрочность») спланов системы Уг — Gr -- Ni, имеющих структуру твердого гамма-раствора, в сильнейшей степени зависит от предварительной термической обработки В частности, автором настоящей статьи неоднократно указывалюсь (ст), что общепривитые режимы дакалки жаростойкой аустепитной стали с педостаточно нысоких температур, лежащих инже температур, дежащих инже температура диссоциации сложных карбидов, не полюдяют использовать до конца всех теплоустойчивых возможностей пердых растворов никеля и хрома. Повышение истрева под закалку до температуры, обеспечивающей полное растворение в аустените сложных карбилов, непосредственно свизанное с сильным ростом аустечиного верна, существение повына-ет свойства прочности (в том числе сопротивление подзучести) при высоких температурах, по в 10 же время резко силжает удлинение и поперечное сужение (Э. Однако, поскольку сустенченые силтны обладают большим запасом пластичности, последнее обстоятельство в практических условиях, как правило, не является препятствием к обработке таких силавов, в целях цовышения их теплоустойчивости, на «крупное зерзо» (2). Была сделана поныска выяснить действительную причину отмеченвого выше влияния исходней термической обработки на теплоустовчивые свойства высоколегированного аустенита. В результате проведенных исследований уделось установить, что повышения теплоустой чивость круппо перинстого аустенита, получаемого в результате термической обработки (закалки) при весьма высоких температурах, может обусловливаться: 1) величиной кристаллического зерна, 2) стененью дегированности твердого раствора в 3) вторичными структурными превращениями, происходящими в твердом растворе при повышенных температурах. В зависимости ст конкретного состава силава и рабочей температу-ры может превыжаровать один на этих факторов. В простейнка случае преимущественное влияние оказывает верым фактор (величина териа), побочие: — второй (стечень легированности); трення фиктор отсутствует.
Примером могут служний твердые раствор химпическай состав соторых пеключест или почти исключает вну свыть происсти при кторионых матрему, жан то: безутлеро превые инхром, м люуглеро н стые пустенет в стали (рис. 1, кривая B). Ken

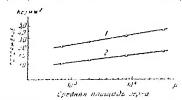
Содержавие в таких силавах углерода не должно превышать его

Содержавие в таких сплавах углерода не достано преобщито съ-предельной растворимости и аустените. В более сложных случаях к первым двум факторам лобавлюется гретий, получающий пол и ие мостепенное значение. Конкретый при-мер — сталь типа 14/14-В с "4—0,5% С, после закалки с высоких температур содержащая т периом растворе значительное количество сложных карбидов хрома вольфрама и молиблена (рис. 1, кризая А).



Proc. 1. $t = 600^{\circ}$, z = 12 Kr,MM $A = \sim 0.05\% \text{ C}$; E = 0.45% C

Влияние всех трех факторов в этом случае суммируется, и зависи-мость характеристик ползучести от температуры закалки (или сред-ней илощади аустепитного зерва) выражается более реако, чем для исстареющей малоуглеродистой стали того же типа (рис. 1).



Puc. 2. Haspon $60/20/I = 700^{\circ}$, $2 \sim 800^{\circ}$

Поскольку состав твердого раствора обоих силавов одинаков, два-грамма рис, I дает представление и об относительном количественном въизвини фактора величины лерна и вторичных структурных превраще-

ний. Естественно, «парциальное» влияние каждого из этих факторов может быть различным в спланах различного химического состава, а лля данного силана—зависеть от рабочей темисратуры. Так, для стали 14/14-В (рис. 1, кривая А) уменанение скорости пользучести при 600° с понышением температуры исходаей завальн произвидяю в большей степени благодара росту мерка и в меньшей за счет дисперсионного тпердения (что пидно из сопоставления кривых А и Б рис. 1). При температуре же 700°, отвечающей наибольшему развитию процессов дисперсионного твердения и стали 14/14-В, налищо обизтися картина. обратиан картина.

Если представить наприжения, отвечающие длительной ползучести со скоростью 10 мм/мм в час, в функции от средней илошади (или .384

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дламетра) аустепитного верна, то для нестареющих вустепитых силавов (например для безуглеродистог» шихрома) зависимость меглуу
этими величинами имречится кривыми параболического характера, а в
зогарифинисской системе координат — привыми линиями (рис. 2).
В то же время для аустепитных силавов, подверженных дасперсионному твердению, прямоличению зависимость в логарифической
системе координат «вэпряжение — площадь верна» установить не удалось; кривые получаются ломаными.

Вилимо, упрочивющее влияще выделяющихся сложных карбидов,
степень дисперсности и количество которых возрастают параллельно

степень дисперености и количество которых возрастают нараллельно росту зерна с повышением температуры закалки (1,4), накладын ется на влияние, оказываемое самой неличиной аустепитного зерна, и искажает характер зависимости, установленной для нестареющих

искажает характер зависимости, установленной долинентердых растворов.
Попутно мы считаем доказанным также то обстоятельство, что наличие в основной аустениткой структуре сфероидизированной карбидной фазы практически не изменяет сопротипления сплава ползучести. Эте видно из взаимного положения начальных точек кринем А и В на рис. 1.

ЦИТИРОВАННАЯ ЛИТЕРАТУРА

¹ А. М. Борадыка, Тр. слин, по тенаоустойчиной и жароупорной стали, All GCCP, 1940. ² А. М. Борадыка, Сталь, № 6, 215 (1945). ³ А. М. Борадыка, Сталь, № 6, 215 (1945). ³ А. М. Борадыка, Ило, сектора фил-хим, анализа, 16, п.2, 116 (1936). ⁴ Г. Акимов и П. Мили, Ита. АН СССР, ОТВ, № 7/8 (1945).